



## IMPROVED SEPARATOR FOR THE DEVELOPMENTAL STAGES, SEXES, AND SPECIES OF MOSQUITOES

Model 5412

*Instructions*

The *Improved Separator for the Developmental Stages, Sexes, and Species of Mosquitoes* is a mechanical device designed and manufactured for the separation of the developmental stages, sexes, and species of mosquitoes. It was originally described in an article appearing in the *Journal of Medical Entomology* (Vol. 17, no. 6: 567-568, 30 December 1980). With few exceptions, all metal parts are power-coated for resistance to corrosion. The top, moveable pane of glass is tempered for strength and safety.

### Description and Use

The unit (see figure) consists of an approximately horizontal aluminum platen (1) supporting 2 glass panes that form between them an adjustable, downward-pointing, wedge-shaped space into which the contents of an aquatic insect culture are poured. The various forms can thus be separated (species, sexes, or developmental stages) on the basis of size by regulating the thickness and angle of the wedge-shaped space by means of 4 control knobs (5). The lower opening is adjusted so that the larger organisms are retained in the tapering space between the panes of glass; the smaller forms drain through into a receiving container below. The operation is completed by opening the wedge and flushing the larger organisms into a second receiving container. The force with which the insects flow between the plates may be varied by adjusting the angle of the platen (3).

Three units of this new design were used on a daily basis without the need for maintenance for ca 2 years in El Salvador in a sterile-male release project to separate daily 500,000-1,000,000 *Anopheles albimanus* pupae by sex. Local operators were able to obtain greater than 85% separation at rates of ca 56,000 pupae per hour per machine. In addition to separating pupae by sex, the machines can be used to separate pupae from larvae.

